

SAMPLE LOADING PROBLEM

	SAMPLE AIRPLANE		YOUR AIRPLANE	
	Weight (lbs.)	Moment (lb.-ins. /1000)	Weight (lbs.)	Moment (lb.-ins. /1000)
1. Basic Empty Weight (Use the data pertaining to your airplane as it is presently equipped. Includes unusable fuel and full oil)	1454	57.6	1514	59.07
2. Usable Fuel (At 6 Lbs./Gal.) Standard Tanks (40 Gal. Maximum) Long Range Tanks (50 Gal. Maximum)	240	11.5		
3. Pilot and Front Passenger (Station 34 to 46)	340	12.6		
4. Rear Passengers	170	12.4		
5. * Baggage Area 1 or Passenger on Child's Seat (Station 82 to 108, 120 Lbs. Max.)	103	9.8		
6. * Baggage Area 2 (Station 108 to 142, 50 Lbs. Max.)				
7. RAMP WEIGHT AND MOMENT	2307	103.9		
8. Fuel allowance for engine start, taxi, and runup	-7	-.3		
9. TAKEOFF WEIGHT AND MOMENT (Subtract Step 8 from Step 7)	2300	103.6		

10. Locate this point (2300 at 103.6) on the Center of Gravity Moment Envelope, and since this point falls within the envelope, the loading is acceptable.

* The maximum allowable combined weight capacity for baggage areas 1 and 2 is 120 lbs.

Figure 6-5. Sample Loading Problem

LOADING ARRANGEMENTS

* Pilot or passenger center of gravity on adjustable seats positioned for average occupant. Numbers in parentheses indicate forward and aft limits of occupant center of gravity range.

** Arm measured to the center of the areas shown.

NOTE: The rear cabin wall (approximate station 108) or aft baggage wall (approximate station 142) can be used as convenient interior reference points for determining the location of baggage area fuselage stations.

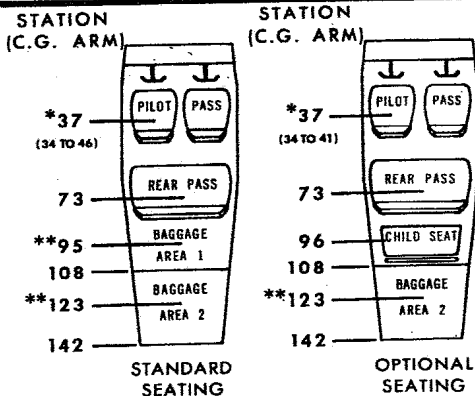
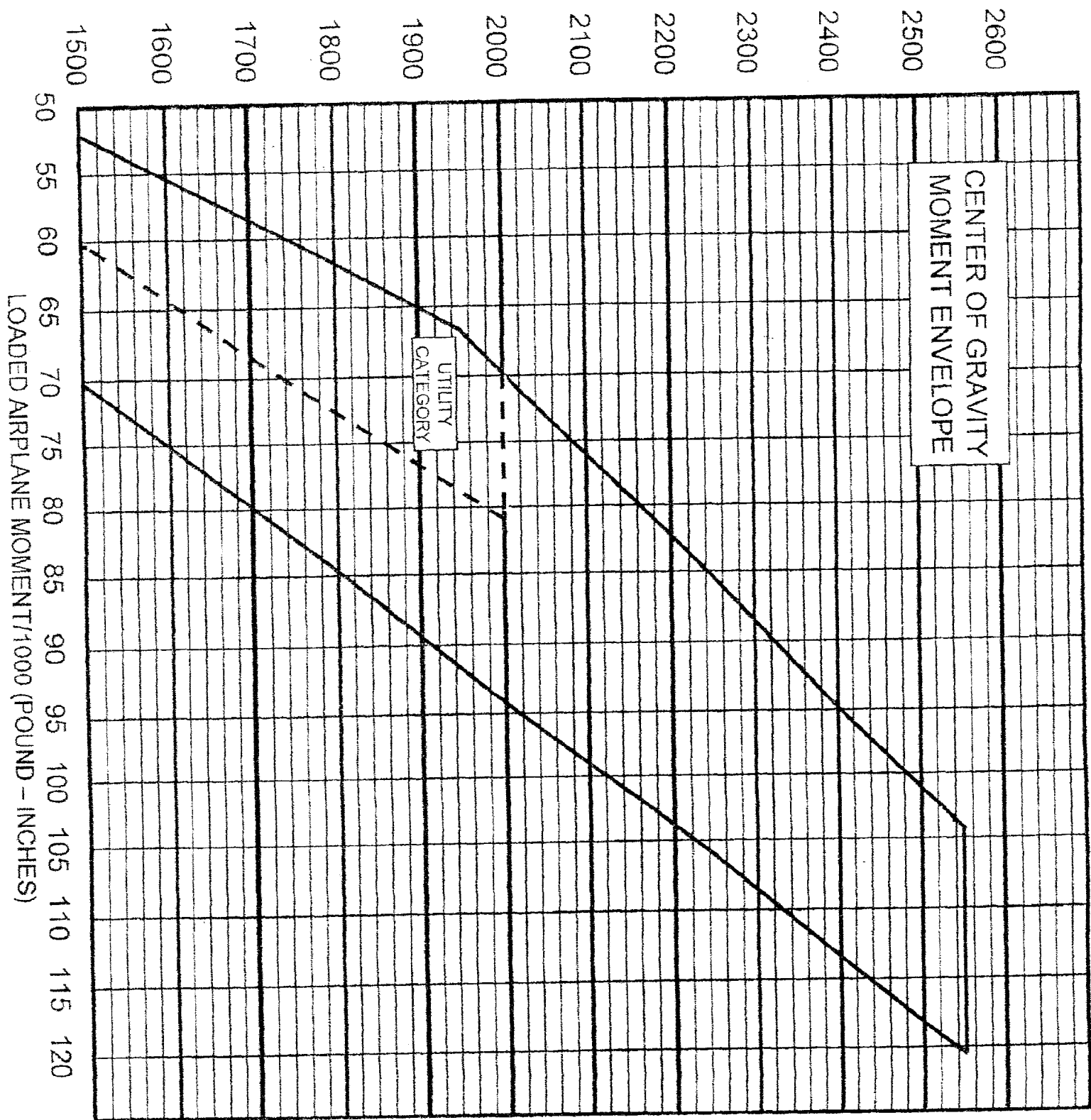


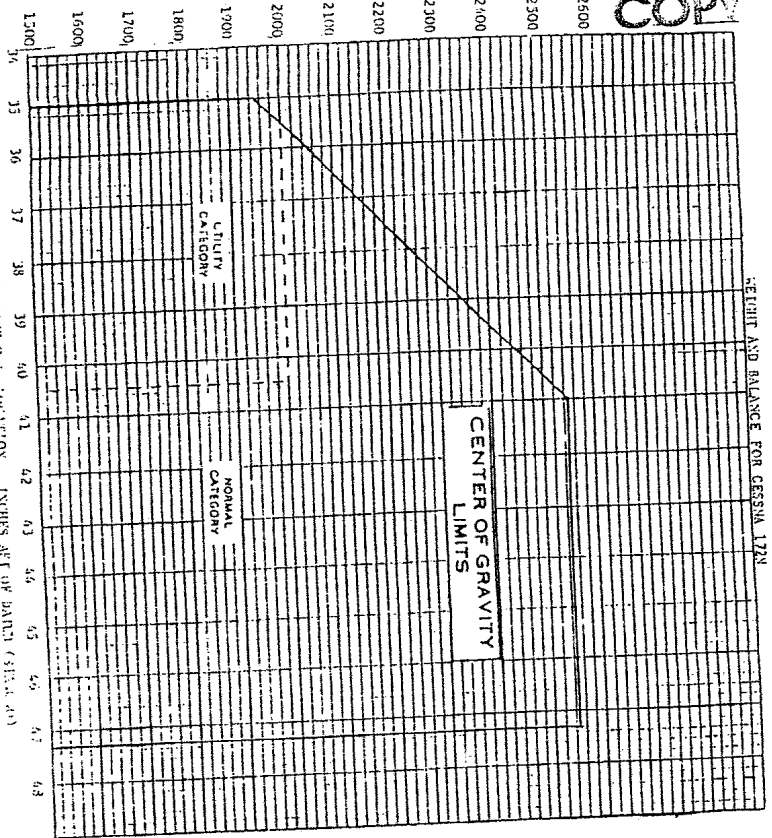
Figure 6-3. Loading Arrangements

LOADED AIRPLANE WEIGHT (POUNDS)



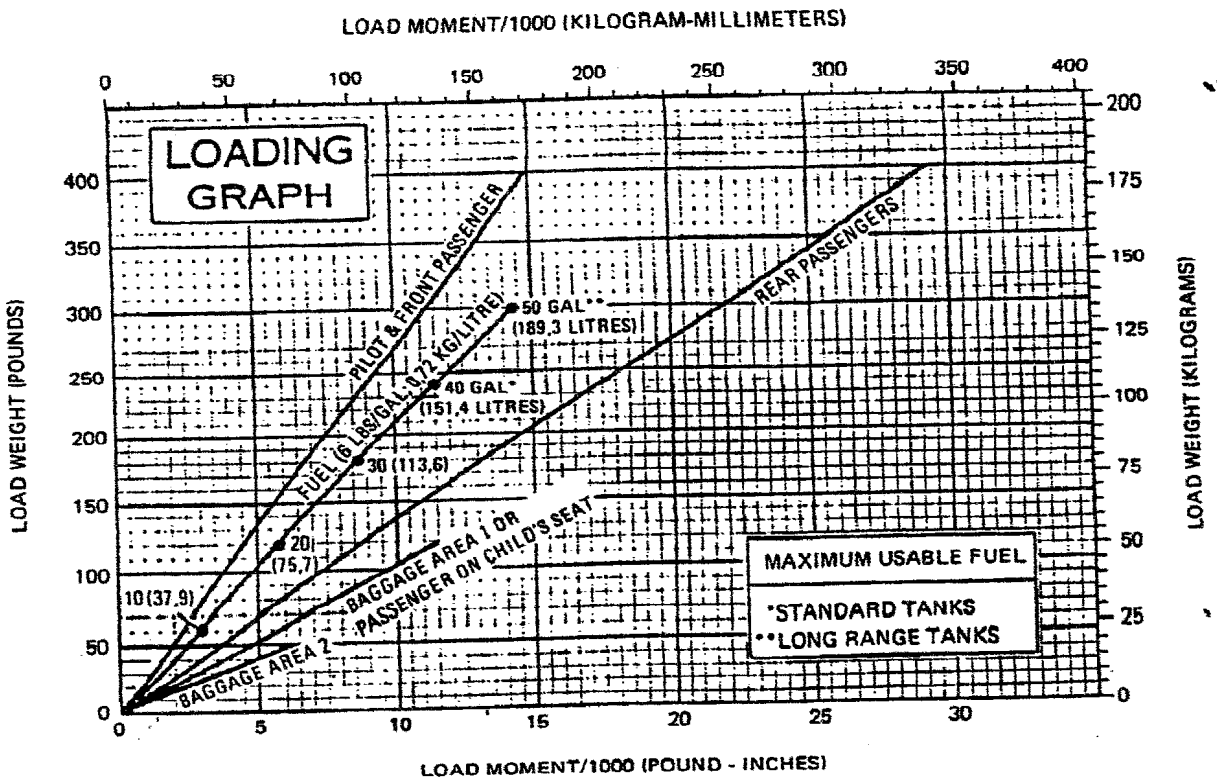
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LOADED AIRPLANE WEIGHT (POUNDS)



WEIGHT AND BALANCE FOR CESSNA 172N

AIRPLANE CG LOCATION INCHES AFT OF DATUM (SEE 20)



NOTE: Line representing adjustable seats shows the pilot or passenger center of gravity on adjustable seats positioned for an average occupant. Refer to the Loading Arrangements diagram for forward and aft limits of occupant C.G. range.

Figure 6-6. Loading Graph